

*Methane Awareness Res. Grp., Diesel Coal. v.  
United States*

No. 6:96-cv-02430-RTH-PJH (W.D. La.)

Def. Mot. Close This Action

Ex. 28



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## The Diesel Exhaust in Miners Study (DEMS)

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Photo by Piedmont Fossil

### Study Background

The National Institute for Occupational Safety and Health (NIOSH) and the National Cancer Institute (NCI) completed a 20-year large scientific study in March 2012 that included 12,315 workers from eight non-metal mining facilities located in Ohio, Missouri, New Mexico, and Wyoming. The Diesel Exhaust in Miners Study (DEMS) was done to further understand whether breathing in diesel exhaust fumes could lead to lung cancer and other health outcomes.

[Read more... \(/niosh/topics/cancer/diesel/DieselExhaustinMinersStudyFull.html\)](http://www2a.cdc.gov/nioshtic-2/BuildQyr.asp?s1=20040457++&f1=%2A&Startyear=&Adv=0&terms=1&D1=10&EndYear=&Limit=10000&sort=&PageNo=1&RecNo=1&View=f&)

### Study Publications

#### Cohort Mortality Study

The Diesel Exhaust in Miners Study: A Cohort Mortality Study With Emphasis on Lung Cancer

(<http://www2a.cdc.gov/nioshtic-2/BuildQyr.asp?s1=20040457++&f1=%2A&Startyear=&Adv=0&terms=1&D1=10&EndYear=&Limit=10000&sort=&PageNo=1&RecNo=1&View=f&>)

Attfield, M. D., P. L. Schleiff, et al. (2012) *J Natl Cancer Inst* 104(11): 869-883

#### Nested Case-Control Study

The Diesel Exhaust in Miners Study: A Nested Case-Control Study of Lung Cancer and Diesel Exhaust (<http://www2a.cdc.gov/nioshtic-2/BuildQyr.asp?s1=20040456++&f1=%2A&Startyear=&Adv=0&terms=1&D1=10&EndYear=&Limit=10000&sort=&PageNo=1&RecNo=1&View=f&>)

Silverman, D. T., C. M. Samanic, et al. (2012) *J Natl Cancer Inst* 104(11): 855-868

#### Exposure Assessment

The Diesel Exhaust in Miners Study: I. Overview of the Exposure Assessment Process

(<http://www2a.cdc.gov/nioshtic-2/BuildQyr.asp?s1=20037878++&f1=%2A&Startyear=&Adv=0&terms=1&D1=10&EndYear=&Limit=10000&sort=&PageNo=1&RecNo=1&View=f&>)

Stewart, P. A., J. B. Coble, et al. (2010) *Ann Occup Hyg* 54(7): 728-746

The Diesel Exhaust in Miners Study: II. Exposure Monitoring Surveys and Development of Exposure Groups (<http://www2a.cdc.gov/nioshtic-2/BuildQyr.asp?s1=20037879++&f1=%2A&Startyear=&Adv=0&terms=1&D1=10&EndYear=&Limit=10000&sort=&PageNo=1&RecNo=1&View=f&>)

Coble, J. B., P. A. Stewart, et al. (2010) *Ann Occup Hyg* 54(7): 747-761

The Diesel Exhaust in Miners Study: III. Interrelations between Respirable Elemental Carbon and Gaseous and Particulate Components of Diesel Exhaust derived from Area Sampling in Underground Non-metal Mining Facilities (<http://www2a.cdc.gov/nioshtic-2/BuildQyr.asp?s1=20037880++&f1=%2A&Startyear=&Adv=0&terms=1&D1=10&EndYear=&Limit=10000&sort=&PageNo=1&RecNo=1&View=f&>)

(<http://www2a.cdc.gov/nioshtic-2/BuildQyr.asp?s1=20037880++&f1=%2A&Startyear=&Adv=0&terms=1&D1=10&EndYear=&Limit=10000&sort=&PageNo=1&RecNo=1&View=f&>)

[2A&Startyear=&Adv=0&terms=1&D1=10&EndYear=&Limit=10000&sort=&PageNo=1&RecNo=1&View=f&](http://www2a.cdc.gov/nioshtic-2/BuildQyr.asp?s1=20037881++&f1=%2A&Startyear=&Adv=0&terms=1&D1=10&EndYear=&Limit=10000&sort=&PageNo=1&RecNo=1&View=f&)  
Vermeulen, R., J. B. Coble, et al. (2010) *Ann Occup Hyg* 54(7): 762-773

The Diesel Exhaust in Miners Study: IV. Estimating Historical Exposures to Diesel Exhaust in Underground Non-metal Mining Facilities (<http://www2a.cdc.gov/nioshtic-2/BuildQyr.asp?s1=20037881++&f1=%2A&Startyear=&Adv=0&terms=1&D1=10&EndYear=&Limit=10000&sort=&PageNo=1&RecNo=1&View=f&>)  
Vermeulen, R., J. B. Coble, et al. (2010) *Ann Occup Hyg* 54(7): 774-788

The Diesel Exhaust in Miners Study: V. Evaluation of the Exposure Assessment Methods (<http://www2a.cdc.gov/nioshtic-2/BuildQyr.asp?s1=20040425++&f1=%2A&Startyear=&Adv=0&terms=1&D1=10&EndYear=&Limit=10000&sort=&PageNo=1&RecNo=1&View=f&>)  
Stewart, P. A., R. Vermeulen, et al. (2012) *Ann Occup Hyg* 56(4): 389-400

### **Editorials, Letters-to-the-Editor, and Responses**

Diesel Exhaust and Underground Miners - Letter from the Editor  
Ogden, T. L. (2010) *Ann Occup Hyg* 54(7): 727

Comments on the Diesel Exhaust in Miners Study - Letter to the Editor  
Borak, J., W. B. Bunn, et al. (2011) *Ann Occup Hyg* 55(3): 339-342

Comments on the Diesel Exhaust in Miners Study - Author's Reply (<http://www2a.cdc.gov/nioshtic-2/BuildQyr.asp?s1=20038576++&f1=%2A&Startyear=&Adv=0&terms=1&D1=10&EndYear=&Limit=10000&sort=&PageNo=1&RecNo=1&View=f&>)  
Stewart, P. A., J. B. Coble, et al. (2011) *Ann Occup Hyg* 55(3): 343-346

The Problem With Diesel - Editorial  
Rushton, L. (2012) *J Natl Cancer Inst* 104(11): 796-797

## **Study Data Release**

NIOSH and NCI believe that transparency, and public health and scientific advancements are best served when, for an appropriate and legitimate public health purpose, data are shared with researchers and other public health agencies in an open, timely, and appropriate way. The Diesel Exhaust in Miners Study has ended and has fulfilled the objectives reported in the research protocol (<http://niosh/topics/cancer/diesel/pdfs/DEMSProtocolObjectivespp15-16.pdf>) [PDF - 58 KB]. As the lead agency for the DEMS – Cohort Mortality Study, NIOSH is providing an application process for potential users to obtain data supporting the DEMS – Cohort Mortality Study. NCI is providing a separate application process for potential users to obtain data supporting the DEMS – Case-Control Study (see NCI (<http://dceg.cancer.gov/oceb/research/exposureassessment/DEMS>) (<http://www.cdc.gov/Other/disclaimer.html>)). In addition, NCI is providing the opportunity to download the exposure data and documentation underlying the exposure assessment methods described in the five published exposure assessment papers shown above in Study Publications (#Exposure).

Data requestors must have a legitimate public health or scientific need for the data and must agree to comply with certain restrictions on the use of the data. Interested parties are required to submit an application and sign a data use agreement prior to receiving any dataset. Applicants will have the option to select one of the two DEMS – Cohort Mortality Study analytical sets described below. Applicants will not have the option to select both sets in a single application. Separate applications and data use agreements are required for each of the analytical sets.


- External Analytical Set will contain the necessary data to conduct standardized mortality ratio analyses. It will **not** include any exposure information. For information about the


variables in this set see [External Analytical Set Variables](http://niosh/topics/cancer/diesel/DEMSCohortVariables.html)  
([/niosh/topics/cancer/diesel/DEMSCohortVariables.html](http://niosh/topics/cancer/diesel/DEMSCohortVariables.html)).

- Internal Analytical Set will contain the necessary data to conduct analyses using proportional hazard models for lung cancer and esophageal cancer mortality. It will include demographic, diesel exhaust exposure, and potential occupational confounder information. For information about the variables in this set see [Internal Analytical Set Variables](http://niosh/topics/cancer/diesel/DEMSCohortVariables.html)  
([/niosh/topics/cancer/diesel/DEMSCohortVariables.html](http://niosh/topics/cancer/diesel/DEMSCohortVariables.html)).


To receive an application for the DEMS – Cohort Mortality Study data send an email to [NIOSHDEMS@CDC.gov](mailto:NIOSHDEMS@CDC.gov) (<mailto:NIOSHDEMS@CDC.gov>). In the subject line, type "**Request for DEMS – Cohort Mortality Study Data**", and in the body of the email include all contact information.


## Related Links


[Coal Diesel Equipment Health and Safety](http://www.msha.gov/S&HINFO/DIESEL.HTM) (<http://www.msha.gov/S&HINFO/DIESEL.HTM>)   
(<http://www.cdc.gov/Other/disclaimer.html>) - Mine Safety and Health Administration (MSHA) Topic Page.


[Diesel engine exhaust \(CASRN N.A.\)](http://www.epa.gov/iris/subst/0642.htm) (<http://www.epa.gov/iris/subst/0642.htm>)   
(<http://www.cdc.gov/Other/disclaimer.html>) - U.S. Environmental Protection Agency (EPA), Integrated Risk Information System (IRIS).


[Diesel Exhaust in Mining](http://www.cdc.gov/niosh/mining/topics/topicpage2.htm) (<http://www.cdc.gov/niosh/mining/topics/topicpage2.htm>) - National Institute for Occupational Safety and Health (NIOSH), Office of Mine Safety and Health Research Topic.

[International Agency for Research on Cancer \(IARC\) Monographs on the Evaluation of Carcinogenic Risks for Humans](http://monographs.iarc.fr/) (<http://monographs.iarc.fr/>)   
(<http://www.cdc.gov/Other/disclaimer.html>) - Monographs identifying environmental factors that can increase the risk of human cancer.

[Lung Cancer](http://www.cancer.gov/cancertopics/types/lung) (<http://www.cancer.gov/cancertopics/types/lung>)   
(<http://www.cdc.gov/Other/disclaimer.html>) - National Institutes of Health (NIH), National Cancer Institute (NCI) Topic on Lung Cancer.

[National Clean Diesel Campaign \(NCDC\)](http://www.epa.gov/otaq/diesel/index.htm) (<http://www.epa.gov/otaq/diesel/index.htm>)   
(<http://www.cdc.gov/Other/disclaimer.html>) - U.S. Environmental Protection Agency's (EPA) National Clean Diesel Campaign.

[Report on Carcinogens \(RoC\)](http://ntp.niehs.nih.gov/?objectid=03C9AF75-E1BF-FF40-DBA9EC0928DF8B15) (<http://ntp.niehs.nih.gov/?objectid=03C9AF75-E1BF-FF40-DBA9EC0928DF8B15>)   
(<http://www.cdc.gov/Other/disclaimer.html>) - US Department of Health and Human Services (DHHS), National Toxicology Program (NTP) 12th Report on Carcinogens.

[Safety and Health Topic on Diesel Exhaust](http://www.osha.gov/SLTC/dielexhaust/index.html) (<http://www.osha.gov/SLTC/dielexhaust/index.html>)   
(<http://www.cdc.gov/Other/disclaimer.html>) - Occupational Safety and Health Administration (OSHA), Safety and Health Topic.

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Content source: [National Institute for Occupational Safety and Health](http://www.cdc.gov/niosh) Division of Respiratory Disease Studies

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